CONCEPTS, COVERAGE, AND TRENDS IN THE 1960 HOUSING INVENTORY

Wayne F. Daugherty, Census Bureau

Two years ago at the American Statistical Association annual meeting I discussed some of the problems associated with developing basic concepts for the 1960 Housing Census and efforts to improve coverage of all private living accommodations. At that time we had not decided on the best way to improve our concepts, nor had we agreed upon procedures necessary to secure better coverage.

Since then we have completed both our plans and the Census. Now, while waiting for the results, we are speculating about the results of our plans. Recently we learned that the preliminary count for 1960 is 58.4 million housing units. This is an increase of more than 12 million units above the count enumerated in 1950—46,137,000 units for what is now 50 States. Nevertheless, the 1960 preliminary count is somewhat below the anticipated figure. We had expected to count about 60 million units based upon information from pretests and other census programs—the CPS household estimates and the 1956 National Housing Inventory. This expected level did include an increase attributable to improvement in our concept of the unit of enumeration which was designed to expand and improve coverage of all private living quarters. We had, at various times, estimated that such improvements might add 1/2 to 1-1/2 million housing units. Further, we anticipated that the general procedure of a two-stage census in 1960 would improve coverage over that obtained in 1950.

In a paper entitled "Living Quarters and Household Concepts in the 1960 Census" given at last year's ASA meeting, Mr. Hugh Rose described at length our attempts to improve the unit of enumeration. The concept was simplified and the criteria for identifying private living quarters was made more comprehensive.

In brief, we hoped to eliminate the complicated applications of a basically simple concept by removing most of the exceptions to the rule. We retained the fundamental concept and even the basic wording of the old dwelling unit. We went one step further, however, to make more explicit our definition of living quarters. We said "a housing unit is separate when occupants do not live and eat with any other household and when there is either (a) direct access through the outside or through a common hall, or (b) kitchen or cooking equipment for the exclusive use of the occupants." In essence, almost everything that was explicit or implicit in the 1950 dwelling unit definition has been retained. But our procedure was strengthened by the either-or aspect of the two fundamental criteria for determining a housing unit.

By far, I think, our greatest reform came in the application of these criteria. We conclusively demonstrated to ourselves, by the research conducted in Washington and pretests in other cities, that enumerators who had to record the presence of access and kitchen by a mark on the census schedules did a more consistent and complete job of enumeration than enumerators who applied the memorized definition of the housing unit without having to record the two criteria on the schedules.

Housing technicians will be keenly aware that this is the first housing census for which we have a record of access and kitchen in connection with the defined housing unit. Users of our data made us painfully aware that in 1950, when we asked the enumerator to apply the definition of the dwelling unit, we had absolutely no inkling of how effectively he applied these concepts, what was the access-kitchen status of dwelling units that were enumerated, nor did we know how many units were in structures enumerated as non-dwelling-unit quarters and thus completely omitted from the housing census. In succeeding years we did learn, both through the results of the post-enumeration survey of the 1950 Census and from housing technicians studying local conditions, that the application of the dwelling unit definition in the 1950 Census left much to be desired. Housing users should not have this complaint about the 1960 Census. Since we have eliminated most exceptions to the rules and strengthened the enumeration procedures, any lack of coverage of housing units will be due to other facets of census operations.

Some minor conceptual problems still remain. For example, we instructed the enumerator not to record vacant trailers as housing units. Future developments in the use of trailers may compel us to modify or abandon this restriction. Someday it may become necessary to include all such structures if evidence develops that vacant trailers or mobile homes are predominantly for occupancy as a home for either an individual or a family.

Another point which creates some concern, particularly in small areas such as census tracts and blocks, is our exclusion from the housing inventory of structures occupied by five or more lodgers whose quarters cannot be defined as individual housing units. The number five was chosen rather arbitrarily. Of more importance is the question whether these structures belong in the housing inventory of whether such use of space should remain in the same category as dormitories, nurses' homes, and barracks.

Aside from these problems, I believe that from both the conceptual and procedural standpoints, we have come a long way toward complete coverage of private living accommodations and their characteristics. Beyond this point we are at the mercy of the coverage that our general procedures succeed in obtaining during a census.

It is in conduct of the census itself that we must look for the reason that the 1960

Census housing unit count has fallen below our expectations. On the other hand, it is possible that we over-anticipated the impact of the change in definition on the number of housing units. On the surface, the lower count seems to negate our efforts to clarify concepts and improve techniques used by the enumerator. During the census, however, we did not find evidence of expected improvements in enumeration that we had anticipated. The problems of coverage in large cities have not been solved. Further, we are aware that, in the processing of census schedules, there are instances where the enumerators' work is so incomplete that our tabulating equipment cannot recognize the entries made for the purpose of including such cases in the housing unit count. This type of loss occurs particularly in connection with vacant houses. Evaluation studies now in progress should permit us to estimate the extent of these problems.

Despite the lower than anticipated preliminary count, there is clear evidence that significant changes in the Nation's housing supply have occurred. The most startling fact has already been widely disseminated through our earliest figures, i.e., a majority (15) of the 25 largest cities in the United States have declined in population while the housing supply of nearly all of these cities has increased. Although not necessarily implying an improvement in the housing situation in every case, a strong argument can be made that the housing situation at least has eased if not improved, for the great majority of these cities.

At the county level, the changes also form an interesting pattern, although at the State level these patterns are lost to some extent. Starting with the pattern of change at the State level you will note that each of the 50 States had some increase in the housing supply.

The average increase in the housing supply for all 50 States in the Nation is in excess of 26 percent. This net increase of more than 12 million units does not fully account for the activity within the housing supply. New construction of houses and apartements, conversion of single family homes, and shifts from nonresidential to residential use added considerably more than 12 million units. Some of these were offset by losses—demolition due to governmental programs as well as private action; abandonment of homes, particularly in rural areas; mergers of two family houses into single family houses; and shifts from residential to nonresidential uses.

The increase in the housing supply from State to State ranges from as little as 2 percent to as much as 99 percent. Significant losses in rural areas and small towns have been overcome in every State by growth in and around the large urban centers. As a result, the State pattern of growth blurs the trend of changes occurring in rural and isolated places, the extent of our suburban growth, and even the changes occurring in the large cities. But even among States the impact of housing changes varies greatly. Five States of the Nation, one of which is Alaska, have increased their housing supply by more than 50 percent. The housing inventory of eleven additional States increased more rapidly than the national average. The increases in these 16 States, which account for only a third of our housing supply, were sufficiently large to balance the slower growth of the remaining 34 States in the Nation. The large increases occurred in the seven Southwestern States, and in Connecticut, Delaware, Florida, Maryland, Michigan, New Jersey, Virginia, and two new States, Alaska and Hawaii. At the other extreme, the minimum net growth in our housing supply occurred in Arkansas and Mississippi.

Turning to changes in the housing supply at the county level, about one-fourth of the counties in our Nation experienced a net loss of housing during the decade. Downward changes in the net supply of housing in an area mean that housing is lost through demolition, abandonment, and merger to a greater extent than produced by new construction and conversion of existing structures. However, there are only a few counties in which the loss exceeds 10 percent for the decade. In contrast, we find that some counties more than doubled their housing supply.

For purposes of discussion, I have grouped the 3,000 counties in the Nation into three strata. First, are counties with a significant decrease in their housing supply; second, are those which remained relatively static (with less than 2.5 percent increase or decrease), and third, those which have had a significant increase in supply. On this basis, about 20 percent of all counties lost housing; 10 percent remained relatively static, and 70 percent of the counties gained. Of the 2,000-odd counties having an increase, the rate of growth exceeded the national average in only 600 counties.

A majority of the counties that have lost housing are located in about 20 States, and are rural in character. On the other end of the scale, those counties showing growth in excess of the national average are scattered throughout the Nation but closely associated with regions of high urban concentration. As you may note from glancing at the map, practically all of the counties on the seaboards have had tremendous growth regardless of whether located on the Atlantic, the Gulf, or the Pacific Coasts. Counties on the Northwestern coastline of Oregon and Washington tend to be an exception.

It is particularly interesting to note that this pattern of change for the decade 1950 to 1960 is not new. During the decade 1940-1950 many counties sustained similar losses in their housing supply while others remained relatively static. Counties which lost or remained static differed little from the pattern shown for the earlier decade. Examining the county-by-county pattern for the two decades, over three-fourths of the counties showed the same pattern of gain or loss, although the degree of loss or gain frequently differed. Nearly half of our counties had the same relative proportionate amount of gain or loss in both decades. Examining this pattern geographically, we find that the 900 counties which sustained a loss of housing in either or

both decades are concentrated in the agricultural plain States and in the Southern cotton belt States. Losses also are evident in counties in the Appalachian Mountains and in sparsely populated counties throughout the Western States. Although these trends are based on preliminary counts, the final reports are likely to show the trends I have outlined today.

With respect to the characteristics of the inventory, our statistical knowledge of 1960 Census results is very sketchy. In checking our processing operations, we have had occasion to examine a few tabulations for reasonableness, consistency, and completeness. Based on fragmentary results in 14 States, I thought you might enjoy predictions of what we think is happening to the character of our housing supply.

An examination of the few housing items which are repeated from census to census, and a look at some of the new items, support the impression that the character of our housing supply is anything but static. The evidence of change from 1950 to 1960 is striking and widespread. For example:

About one-fourth of our housing inventory will be reported as built during the 1950's.

The average size of households continues to decrease in almost all States.

Home ownership has reached its highest level.

The size of the housing unit, in terms of rooms, is larger except for the New England States; this reverses the decline in the 1940's.

Our supply of vacant housing has doubled in 10 years.

The decline in farm housing is so great that it is becoming unimportant statistically. This is a result of the far-reaching changes occurring in agriculture as well as change in the definition used to measure farm housing. (All vacant rural housing is classified as nonfarm housing.)

The number of dilapidated housing units is somewhat less than the 4.3 million we had in 1950 while the proportional decline is sharper due to the larger supply of housing.

There are other changes which imply higher standards of living as well as greater flexibility in the use of our supply.

Housing on the market for rent or sale is of much better quality than in 1950 in terms of availability of plumbing facilities.

Hot and cold running water is available to many more homes than in 1950.

Likewise, the existence of toilet and bathing facilities for exclusive use of the household has increased markedly.

The number of homes without piped water supply, toilet or bathing facilities is about half the 1950 figures.

The number of homes with more than one person per room has declined substantially.

PERCENTAGE CHANGES IN HOUSING SUPPLY OF COUNTIES IN THE UNITED STATES: 1940 TO 1950 AND 1950 TO 1960

Percentage change: 1940 to 1950	Number of counties	Percentage change: 1950 to 1960							
		Decrease			Increase				
		9.5 or more	2.5 to 9.4	0.1 to 2.4	0.1 to 2.4	2.5 to 9.4	9.5 to 29.4	29.5 to 99.4	99.5 or more
Total.....	3,073	210	381	177	173	586	1,014	483	49
Decrease:									
9.5 or more.....	173	56	44	12	10	16	21	13	1
2.5 to 9.4.....	309	69	116	33	24	35	29	1	2
0.1 to 2.4.....	158	15	48	25	23	22	14	11	...
Increase:									
0.1 to 2.4.....	158	13	35	21	22	45	18	4	...
2.5 to 9.4.....	535	32	72	47	46	179	136	22	1
9.5 to 29.4.....	1,192	19	61	33	41	252	636	142	8
29.5 to 99.4.....	496	5	5	4	6	36	150	265	25
99.5 or more.....	52	1	...	2	1	1	10	25	12

NOTE: Based on preliminary counts for 1960.

Among the new items included in the census, there is one considered fundamental to evaluating the quality of our housing stock. Having learned from the 1950 Census that dilapidated housing is a very small proportion of our supply, we have added another gradation to the "Condition" concept so that not dilapidated housing is now reported as either sound or deteriorating. Even with this additional gradation we can expect nearly three-fourths of our inventory to be classified as sound. For those particularly concerned with inadequate housing we are providing another measure—the number of units sharing facilities. At the moment, it seems unlikely that more than five percent of households are sharing bathing and toilet facilities, kitchens or access to unit.

All in all, these last 10 years have been ones in which extensive changes have occurred in the field of housing. Although I have been able only to discuss changes in the most sketchy form, the evidence indicates that the housing used by the American people is better—both in quantity and quality. When the final reports are analyzed, it is hoped that they will aid in identifying weaknesses in our housing supply and in the markets for housing, essential facilities and equipment, thereby furnishing the basis for action for better housing for all.